

### REMARKS

Reconsideration of the patentability of applicant's claims is requested respectfully.

#### Status of the Claims

The Examiner's Action addresses all of applicant's elected claims, namely Claims 1, 2, 6, 8 to 12, 14, 22 and 24 to 41. Claims 1, 2, 8, 11, 25, and 29 have been amended. No additional claims have been withdrawn or cancelled. Accordingly, there is presented for the Examiner's consideration Claims 1, 2, 6, 8 to 12, 14, 22 and 24 to 41.

The structure of "Formula I" in Claim 1 was amended to incorporate limitations recited in the claim into the structure ( "m" = 1 and X<sub>2</sub> and X<sub>2a</sub> taken together are an oxo group), with deletion of those claim elements incorporated. Claim 1 was amended also to unambiguously identify each of the optional substituents which can be appended to the functional groups recited in the claim: alkyl substituents (supported in the specification on page 5, lines 14 to 18); aryl substituents (supported on page 6, lines 21 to page 7, line 3); heteroaryl substituents (supported on page 7, lines 8 to 9); aralkenyl substituents (supported on page 8, line 1 to 2, which defines the moieties comprising aralkenyl functional groups, page 6, lines 17 to 20, which defines the substituents which may be appended to an aryl moiety, and page 5, line 24 to page 6, line 2 which defines the substituents that may be appended to an alkenyl moiety); heteroaralkenyl substituents (supported on page 8, lines 3 to 6, which defines the moieties comprising heteroaralkenyl functional groups, page 7, lines 4 to 21, and page 5, line 24 to page 6, line 2 defining the substituents that may be appended to each moiety thereof); aralkyl substituents (supported on page 7, lines 22 to 24, which defines the moieties comprising an aralkyl functional group, page 7, lines 4 to 21, and page 5, line 24 to page 6, line 2 that define the substituents that may be appended to each moiety thereof); heteroaralkyl substituents (supported on page 7, lines 25 to 28, defining the moieties comprising a heteroaralkyl functional group, page 7, lines 4 to 21, and page 5, line 24 to page 6, line 2 defining the substituents that may be appended to each moiety thereof), alkenyl substituents (supported on page 5, lines 29 to 30), cycloalkyl substituents (supported on page 6, lines 5 to 7), heterocycl substituents (supported

on page 6, lines 8 to 16), and lower alkyl substituents (supported on page 5, lines 14 to 18). Editorial amendments were also made to claim 1.

In like manner, claims 2, 8, and 25 were amended to clarify the substituents which can appear on the various moieties comprising the substituent groups defined therein. Each of the amended substituent species is supported in the specification as identified above for claim 1 for a particular substituent species.

Claim 11 was amended to unambiguously identify the substituent groups which can be appended to each of the heteroaryl substituent species enumerated therein. This amendment is supported on page 7, lines 8 to 9.

Claim 29 was amended to incorporate the various structure limitations recited in the claim into the structure and those limitations were deleted from the claim.

#### Summary of the Examiner's Rejections

In response to applicant's Reply dated May 24, 2003, the Examiner has not reasserted the rejections raised in the Action of January 24, 2003, but has asserted new rejections. Reconsideration of the Examiner's rejections is requested respectfully.

#### Discussion of the Examiner's §112 Rejection

Claims 1, 2, 6, 8 to 12, 14, 22, 24, 25, and 29 to 41 have been rejected under 35 U.S.C. §112 as being indefinite. Each of claims 1, 2, 8, 11, and 25 have been amended to replace the term "substituted" as it is used to indicate a substituent on a functional group of the compound defined in the claim with the term(s) appearing in applicant's specification identifying the particular substituent(s) which may appear on the functional group defined in the claim. Accordingly, the Examiner is requested respectfully to withdraw the §112 rejection of these claims and their dependent claims.

#### Discussion of the Examiner's §102(e) Rejection

Claims 1, 6, 8 to 12, 14, 25, and 28 to 30 have been rejected under 35 U.S.C. §102 (e) as being anticipated by the disclosure of U.S. Patent No. 6,639,023 to Salvino et al. The Examiner has objected to claims 26 and 27 as depending from rejected independent claim 1.

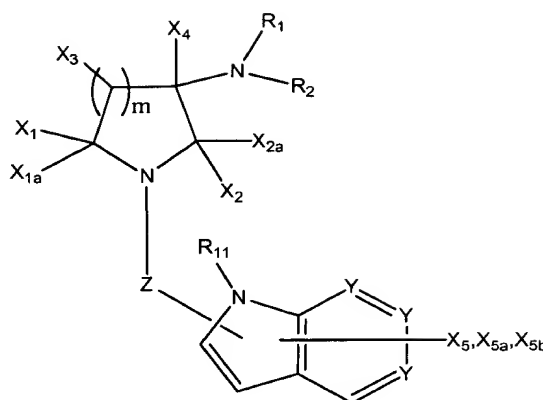
U.S. Patent No. 6,639,023, cited in support of the Examiner's 35 U.S.C. §102(e) rejection, issued October 23, 2003 to Salvino et al. (the "Salvino reference"). The Salvino reference issued from an application filed on January 19, 2000, which is a continuing application based on International Application No. PCT/US99/14252, filed on June 23, 1999, and which in turn claimed the priority of U.S. Provisional application No. 60/090,558, filed June 24, 1998. The international application of which the Salvino reference is a continuing application has a filing date prior to November 29, 2000. Accordingly, with reference to MPEP §706.02 (f)(1)(C)(3)(a) and Example 9 therein, the filing date of the Salvino reference, January 19, 2000, is the date upon which it is effective as a §102(e) reference.

The present application is a divisional of U.S. Application No. 09/453,307, and accordingly has an effective filing date of December 2, 1999. The Salvino reference cited by the Examiner is only effective as prior art under 35 U.S.C. §102(e) as of January 19, 2000, which is 49 days after the effective filing date of the present application. In accordance with MPEP §706.02 (f)(1)(C) the Salvino reference can not serve as the basis for a §102(e) rejection of the present application, and is not prior art against the present application. Accordingly, the Examiner's 35 U.S.C. §102(e) rejection is improper. Reconsideration by the Examiner and withdrawal of the rejection of the claims under U.S.C. §102(e) is respectfully requested.

#### Summary of Applicant's Invention

Applicant's invention was summarized in the Reply that was filed on May 20, 2003. Summarizing from the earlier Reply, applicant's invention is directed to compounds having the formula of Structure I:

STRUCTURE I



wherein "Z", X<sub>1</sub>, X<sub>1a</sub>, X<sub>2</sub>, X<sub>2a</sub>, X<sub>3</sub>, X<sub>4</sub>, X<sub>5</sub>, X<sub>5a</sub>, X<sub>5b</sub>, R<sub>1</sub>, R<sub>2</sub>, R<sub>11</sub>, and "m" are as defined in claims 1 and 29. One of the positions in the pyridinyl ring of the pyrrolo-pyridinyl bicyclo moiety represented by "Y" is selected to be a nitrogen atom and the remaining "Y" positions are occupied by a carbon atom. Furthermore, each of "Z" and X<sub>5</sub>, X<sub>5a</sub>, X<sub>5b</sub> is attached to a carbon of the pyrrolo-pyridine bicyclo ring, as defined, for example, in claim 1. Accordingly, these compounds comprise (for "m" = 1) a pyrrolopyridine-substituted pyrrolidinyl or pyrrolidone moiety (or where "m" is greater than 1, another nitrogen heterocycle). The moiety of any of the species included in Structure I is referred to herein for convenience as the "pyrrolidin moiety"). Further, the pyrrolidin moiety of the subject compounds is substituted with an amine, amide, sulfonamide, or nitrogen bearing one of the substituents defined in claim 28. The pyrrolidin moiety of the subject compounds is bonded through an aliphatic hydrocarbon or amine functional group (identified in the claims as a "Z" functional group) to a pyrrolo-pyridine moiety, as defined in, for example, claim 1. Applicant's invention also includes the use of these compounds as a medicament.

Summary of the Disclosure of

U.S. Patent No. 6,639,023 to Salvino et al. (Salvino Reference)

The Salvino reference describes the preparation of derivatized resin beads bearing substituents which are reactive toward amines, including sulfonyl substituents useful for preparing sulfonamides from amines in the synthesis of, for example, peptides. In Examples 24, 25, and 26, the Salvino reference describes the preparation of various 2-oxo-1-(pyrrolo(pyridine-2-ylmethyl)-amido (or sulfonamide) compounds (see the Salvino reference col. 87, line 35 to col. 94, line 10). The

Salvino reference discloses that these compounds are prepared by reaction of an amine (2-oxo-1(pyrrolo{pyridine-2-ylmethyl}) amine) with the functionalized polymer described and claimed therein to yield the corresponding sulfonamide.

The compounds described in the Salvino reference are presented as an illustration of the reactivity of the functionalized polymer disclosed therein with amines. The Salvino reference does not describe how to prepare the amine reactant compounds used in the examples and gives no details regarding the preparation of structural variations of the amino starting materials described therein. Furthermore, the Salvino patent does not describe a utility for the compounds prepared in the examples. Accordingly, the Salvino reference does not broadly describe compounds comprising an azaheterocyclamine portion and bonded thereto, a monocycl or bicycloheteroaryl portion. The pending claims therefore also patentably define over Salvino *et al.*, if it were prior art.

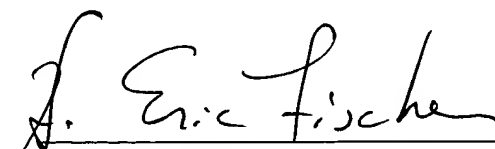
In view of the foregoing amendments and arguments, applicant requests respectfully that the Examiner allow the application in an early and favorable action. Applicant's agent respectfully requests that the Examiner telephone the undersigned if there are any questions regarding this Reply.

No fee is believed to be due in connection with this reply. If any fees are due in connection with this Reply, the Examiner is authorized to charge Applicant's Deposit Account 19-5425, therefore.

Respectfully submitted,  
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August 18, 2004

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